AMENDMENTS TO THE CLAIMS

1.-24. (Canceled)

25. (New) A method for correcting at least one aberration in an optical system, comprising:

providing a radiation adjustable layer to a component of the system;

determining the at least one aberration; and

applying radiation to the radiation adjustable layer such as to modify an optical characteristic of the radiation adjustable layer to at least partially compensate for the at least one aberration.

26. (New) The method of claim 25 wherein the component is a refractive element.

27. (New) The method of claim 25 wherein the component is a reflective element.

28. (New) The method of claim 25 wherein the optical system is selected from the group consisting of:

a telescope, and a camera.

29. (New) The method of claim 25 wherein the applying comprises:

applying the radiation in a pattern from the determining.

30. (New) The method of claim 29 wherein the pattern is opposite in phase to the determined aberration.

31. (New) The method of claim 29 wherein the applying comprises:

generating the radiation with a vertical-cavity surface-emitting laser array.

32. (New) The method of claim 29 wherein the applying comprises:

using an apodizing filter having a predetermined transmission intensity profile to form the pattern.

33. (New) The method of claim 29 wherein the applying comprises:

using a liquid crystal cell to form the pattern.

34. (New) The method of claim 29 wherein the applying comprises:
using a spatial light modulator to form the pattern.

35. (New) The method of claim 29 wherein the applying comprises:
using a digital light processor to form the pattern.

36. (New) The method of claim 29 wherein the applying comprises:
using a digital mirror device to form the pattern.

37. (New) The method of claim 29 wherein the pattern has an intensity profile that changes as the radius of the pattern increases from the center of the pattern.

38. (New) The method of claim 25 wherein the applying comprises:
controlling the radiation during the applying.

39. (New) The method of claim 28 wherein the controlling comprises:
controlling at least one of intensity and duration of the radiation.

40. (New) The method of claim 25 wherein the adjustable layer comprises a polymer matrix, and a radiation sensitive refraction modulating composition dispersed in the polymer matrix.

41. (New) The method of claim 25 wherein the radiation is ultraviolet light.

42. (New) The method of claim 25 wherein the determining comprises:
using a Shack-Hartmann sensor to determine the aberration.

43. (New) The method of claim 25 further comprising:
irradiating, subsequent to applying, the adjustable layer to lock in the modified characteristic.

44. (New) The method of claim 43, wherein the irradiating comprises:
applying a lock-in pattern that has a top hat intensity profile.

45. (New) The method of claim 43, wherein the irradiating comprises:
applying a lock-in pattern that has an intensity profile that diminishes as the radius increases from the center.

46. (New) An optical element comprising:

a portion that affects a path of incident light; and

a layer that is adjacent to the portion and is adjustable such that radiation modifies at least one optical characteristic of the layer.

47. (New) The element of claim 46 wherein the element is a component of a optical system is selected from the group consisting of:

a telescope, and a camera.

48. (New) The element of claim 46 wherein the element is a refractive element.

49. (New) The element of claim 46 wherein the element is a reflective element.